Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Rate**

**For each problem, underline the important information from the problem. Then, state which units will go in the numerator and denominator.**

Joseph types a 1,200-word essay in 25 minutes. At this rate, determine how many words he can type in 45 minutes.

A writer was paid $35,000 for a 5,000-word essay. Find the rate per word.

**Solve each problem. Show all your work.**

3. What is the speed, in meters per second, of a paper airplane that flies 24 meters in 6 seconds?

4. The chart below compares two runners:

|  |  |  |
| --- | --- | --- |
| **Runner** | **Distance (in miles)** | **Time (in hours)** |
| Greg | 11 | 2 |
| Dave | 16 | 3 |

Based on the information in this chart, state which runner has the faster rate. Justify your answer.

5. Tom drove 290 miles from his college to home and used 23.2 gallons of gasoline. His sister, Ann, drove 225 miles from her college to home and used 15 gallons of gasoline. Whose vehicle had better gas mileage? Justify your answer.

6. Sam’s aerobics class exercise to fast music. If the rate of the music is 120 beats per minute, how many beats would there be in a class that is 0.75 hour long?

7. Hannah took a trip to visit her cousin. She drove 120 miles to reach her cousin’s house and the same distance back home.

1. It took her 1.2 hours to get halfway to her cousin’s house. What was her average speed, in miles per hour, for the first 1.2 hours of the trip?
2. Hannah’s average speed for the remainder of the trip to her cousin’s house was 40 miles per hour. How long, in hours, did it take her to drive the remaining distance?
3. Traveling home along the same route, Hannah drove at an average speed of 55 miles per hour. After 2 hours her car broke down. How many miles was she from home?